

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A system for evaluating simulators using ~~simulation of~~ a circuit design comprising:
 - a processor;
 - a reference simulator configured to generate golden data by executing a first simulation image using the processor, wherein the first simulation image is compiled from a first implementation of the circuit design;
 - a test simulator configured to generate test data by executing a second simulation image, wherein the second simulation image is compiled from a second implementation of the circuit design; and
 - a comparator configured to select a portion of the test data, use a mapping rule of a plurality of mapping rules to identify a portion of the golden data associated with the portion of the test data, and generate a comparison result by comparing the portion of the golden data to the portion of the test data before the execution of the second simulation image on the test simulator has completed,wherein the plurality of mapping rules map an internal hierarchy of the first implementation to an internal hierarchy of the second implementation, and
wherein the comparison result is used to debug ~~at least one selected from a group of the circuit design and~~ the test simulator ~~[[,]]~~ by correcting and displaying an error detected in the comparison result.
2. (Previously Presented) The system of claim 1 further comprising:
 - a golden data repository storing the golden data.
3. (Original) The system of claim 1, wherein comparing the portion of the golden data to the portion of the test data occurs dynamically.
4. (Original) The system of claim 3 further comprising:
 - a buffer to store the golden data.

5. (Original) The system of claim 4, wherein the comparator is configured to wait to compare the portion of the golden data to the portion of the test data until after the golden data is stored in the buffer.
6. (Cancelled)
7. (Cancelled)
8. (Previously Presented) The system of claim 1, wherein the mapping rule is obtained while the test simulator is halted.
9. (Cancelled)
10. (Cancelled)
11. (Currently Amended) A method of evaluating a test simulator using simulation of a circuit design comprising:
 - executing a first simulation image on a reference simulator to obtain golden data, wherein the first simulation image is obtained by compiling a first implementation of the circuit design;
 - executing a second simulation image on ~~[[a]]~~ the test simulator to obtain test data, wherein the second simulation image is obtained by compiling a second implementation of the circuit design;
 - selecting a portion of the test data;
 - using a mapping rule of a plurality of mapping rules to identify a portion of the golden data associated with the portion of the test data; ~~[[and]]~~
 - comparing the portion of the golden data to the portion of the test data to obtain a comparison result,
 - wherein the plurality of mapping rules map an internal hierarchy of the first implementation to an internal hierarchy of the second implementation; ~~[[,]]~~
 - and
 - debugging wherein the comparison result is used to debug at least one selected from a group of the simulation design and the test simulator ~~[[,]]~~ by correcting and displaying an error detected in the comparison result.

12. — 14. (Cancelled)

15. (Original) The method of claim 11 further comprising:
storing the golden data in a golden data repository.

16. (Cancelled)

17. (Cancelled)

18. (Original) The method of claim 11, wherein the step of comparing the selected golden data to the selected test data waits on storing the golden data in a buffer.

19. (Previously Presented) The method of claim 11, wherein the step of selecting the portion of the test data is performed dynamically.

20. (Cancelled)

21. (Cancelled)

22. (Previously Presented) The method of claim 11, wherein the step of executing the second simulation image is halted to obtain the mapping rule.

23. (Cancelled)

24. (Cancelled)

25. (Currently Amended) A computer system for evaluating a test simulator using simulation of a circuit design comprising:
a processor;
a memory;
a storage device; and
software instructions stored in the memory for enabling the computer system to:
execute a first simulation image on a reference simulator to obtain golden data,
wherein the first simulation image is obtained by compiling a first implementation of the circuit design;

execute a second simulation image on [[a]] the test simulator to obtain test data,
wherein the second simulation image is obtained by compiling a second
implementation of the circuit design;
select a portion of the test data;
use a mapping rule of a plurality of mapping rules to identify a portion of the
golden data associated with the portion of the test data; and
compare the portion of the golden data to the portion of the test data to obtain a
comparison result,
wherein the plurality of mapping rules map an internal hierarchy of the first
implementation to an internal hierarchy of the second implementation; [[,]]
and
~~wherein the comparison result is used to debug at least one selected from a group~~
~~of the simulation design and~~ debug the test simulator [[,]] by correcting
and displaying an error detected in the comparison result.

26. — 30. (Cancelled)

31. (Currently Amended) The system of claim 1, wherein the test simulator executes the
second simulation image in lockstep with execution of the first simulation image.

32. (Currently Amended) The system of claim 1, wherein the reference simulator executes
the first simulation image in lockstep with execution of the second simulation image.

33. (Previously Presented) The system of claim 1, wherein the portion of the test data is
generated after the golden data is generated.

34. (Currently Amended) The method of claim 11, wherein the step of executing the first
simulation image on the test simulator is performed in lockstep with the step of executing
the second simulation image.

35. (Currently Amended) The method of claim 11, wherein the step of executing the second
simulation image on the reference simulator is performed in lockstep with the step of
executing the first simulation image.

36. (Previously Presented) The method of claim 11, wherein the portion of the test data is generated after the golden data is generated.
37. (Currently Amended) The computer system of claim 25, wherein the test simulator executes the second simulation image in lockstep with execution of the first simulation image.
38. (Currently Amended) The computer system of claim 25, wherein the reference simulator executes the first simulation image in lockstep with execution of the second simulation image.
39. (Previously Presented) The computer system of claim 25, wherein the portion of the test data is generated after the golden data is generated.
40. (New) The method of claim 11, wherein the user data is altered while executing the second simulation image.
41. (New) The method of claim 11, wherein the test simulator is debugged while executing the second simulation image.
42. (New) The method of claim 11, wherein the comparison result is displayed while executing the second simulation image.